

AMENDMENTS TO THE DRAWINGS

The attached replace sheet of drawings include changes to Fig. 14. More specifically the reference number “14b” has been replaced by the reference number “14d” as suggested by the Examiner. A copy of the replacement sheet is attached as an Appendix to this Amendment.

REMARKS

SUMMARY OF THE OFFICE ACTION

The Examiner has objected to the title as not being descriptive, and a new title has been required. The Examiner has also objected to the drawings because reference number 14d is labeled as reference number 14b. The Examiner has further objected to the specification because of a minor informality in the Abstract and a possible typographical error on page 20. The Examiner has objected to claims 1-22, 27-28 and 39 because of relatively minor grammatical informalities. On the merits, the Examiner has rejected claims 7, 9, 11 and 29-36 under 35 U.S.C. § 102(e) as being anticipated by TAN (U.S. Patent No. 6,490,353). The Examiner has also rejected claims 1, 3, 5, 13-15, 18, 20, 22, 25, 28 and 37-38 under 35 U.S.C. § 103(a) as being unpatentable over TAN.

THE OBJECTION TO THE TITLE

The Examiner has objected to the title as not being descriptive. Accordingly, the title has been amended to read, DATA ENCRYPTION AND DECRYPTION METHOD AND APPARATUS UTILIZING DIFFERENT ENCRYPTION ALGORITHM MODULE COMBINATIONS. The Examiner is respectfully requested to withdraw the objection to the title.

THE OBJECTION TO THE DRAWINGS

The Examiner has objected to the drawings, because Fig. 14 includes two reference numbers "14b". Accordingly, the second occurrence of reference number "14b" has been

replaced by the reference number "14d" as suggested by the Examiner. A copy of the replacement sheet is attached as an Appendix to this Amendment.

THE OBJECTION TO THE SPECIFICATION

The Examiner has objected to the Abstract. Accordingly, a new Abstract on a separate sheet of paper is attached as an Appendix to this Amendment. The Examiner has also objected to the sequence of numbers "01 01 01 02 02 02 03 04" as possibly not being consistent with the description on pages 19-20. It is believed that the sequence of numbers is correct and that no amendment of the sequence of numbers is necessary.

THE CLAIM OBJECTIONS

The Examiner has objected to claims 1-21 and 27-28. Accordingly, independent claims 1, 5, 13, 15, 16 and 27 have been amended by deleting the word "a" and inserting "each" as suggested by the Examiner. The Examiner has also objected to claims 1, 5, 13, 15, 16 and 27 as being grammatically incorrect. Accordingly, claims 1, 5, 13, 15, 16 and 27 have been amended to read "that matches an attribute of" as suggested by the Examiner.

THE PRIOR ART REJECTIONS

The Examiner has rejected claims 7, 9, 11 and 29-36 under 35 U.S.C. § 102(e) as being anticipated by TAN, and claims 1, 3, 5, 13-15, 18, 20, 22, 25, 28 and 37-38 under 35 U.S.C. § 103(a) as being unpatentable over TAN. Applicants respectfully submit that the claims as amended are patentable over TAN, which teaches:

The underlying encryption process is a modular one, such that data which is to be transmitted in a secret message is broken up into components and essentially independent "modular" encryption is applied to each component. Whereas many encryption systems rely on complex encryption algorithms which require extensive computer processing resources, the inventive system can use many different simple securithms and/or many different simple sub-keys in order to

create encrypted messages which have a similar or greater degree of security. The embodiment described below is a system in which both securithms and sub-keys are changed for each data block of the secret message. (emphasis added) [col. 8, lines 25-36].

The system of TAN does not disclosed the claimed method or apparatus for dynamically maintaining a balance between security level and processing speed, as claimed by Applicants. TAN maintains processing speed by breaking the message into components and applying simple “securithms” or algorithms to the various components to maintain a certain degree of security. Alternatively, TAN discloses the use of simple sub-keys. In other words, complex encryption algorithms are avoided, and processing speed is maintained by using simple algorithms or sub-keys and eliminating extensive computing processing resources.

In the listing of claims, the independent claims have been amended to emphasize that the method and apparatus of Applicants’ claimed invention maintains a balance between processing speed and a desired security level. Contrary to the teachings of TAN, Applicants’ invention does use simple algorithms or simple sub-keys to maintain a balance between security level and processing speed. Instead Applicants maintain a balance between processing speed and security level by utilizing, for example, a “data attribute” to select an “encryption module indicator” to control the processing of the input data. Unlike TAN, Applicants are able to process the input data using conventional and relatively complex encryption algorithms without unnecessarily sacrificing processing speed. Accordingly, TAN does not disclose the claimed method or apparatus for maintaining a balance between security level and processing speed, and Applicants respectfully submit that claims 7, 9, 11 and 29-36 are not anticipated by TAN.

Applicants also respectfully submit that claims 1, 3, 5, 13-15, 18, 20, 22, 25, 28 and 37-38 are not unpatentable over TAN under 35 U.S.C. § 103(a). The Office Action asserts on page 10, that:

It would have been obvious to the ordinary person skilled in the art at the time of invention to have included an indication of the complexity level of securithm in the pool. This would have been obvious because the ordinary person skilled in the art would have been motivated to allow the system to easily identify the complexity of each securithm when determining which securithm were complex enough for the policy regarding the data being encrypted.

Applicants believe that TAN does not disclosure of the claimed apparatus or method for maintaining a balance between security level and processing speed. Moreover, TAN teaches away from the claimed invention by suggesting that complex encryption algorithms should be avoided in favor of relatively simple securithms or simple sub-keys disclosed by TAN. For example, instead of teaching the one of ordinary skill to use the claimed “encryption algorithm module indicator” for dynamically maintaining a balance between security level and processing speed when using conventional and relatively complex algorithms, TAN motivates one skilled in the art to reject the conventional and relatively complex algorithms in favor of the relatively simple securithms or sub-keys. Since TAN motivates one skilled in the art to reject the use of conventional and relatively complex encryption and decryption algorithms, Applicants respectfully submit that claims 1, 3, 5, 13-15, 18, 20, 22, 25, 28 and 37-38 are patentable over TAN and that the rejection under 35 U.S.C. § 103(a) must be withdrawn.

CONCLUSION

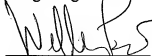
Any amendments to the claims which have been made in this amendment, and which have not been specifically noted to overcome a rejection based upon the prior art, should be

considered to have been made for a purpose unrelated to patentability, and no estoppel should be deemed to attached thereto.


Should an extension of time be necessary to maintain the pendency of this application, the Commissioner is hereby authorized to charge any additional fee to Deposit Account No. 19-0089.

If the Examiner has any questions or comments regarding this response, or the present application, the Examiner is invited to contact the undersigned at the below-listed telephone number.

Respectfully submitted,
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